

FIG. 1A  
PRIOR ART

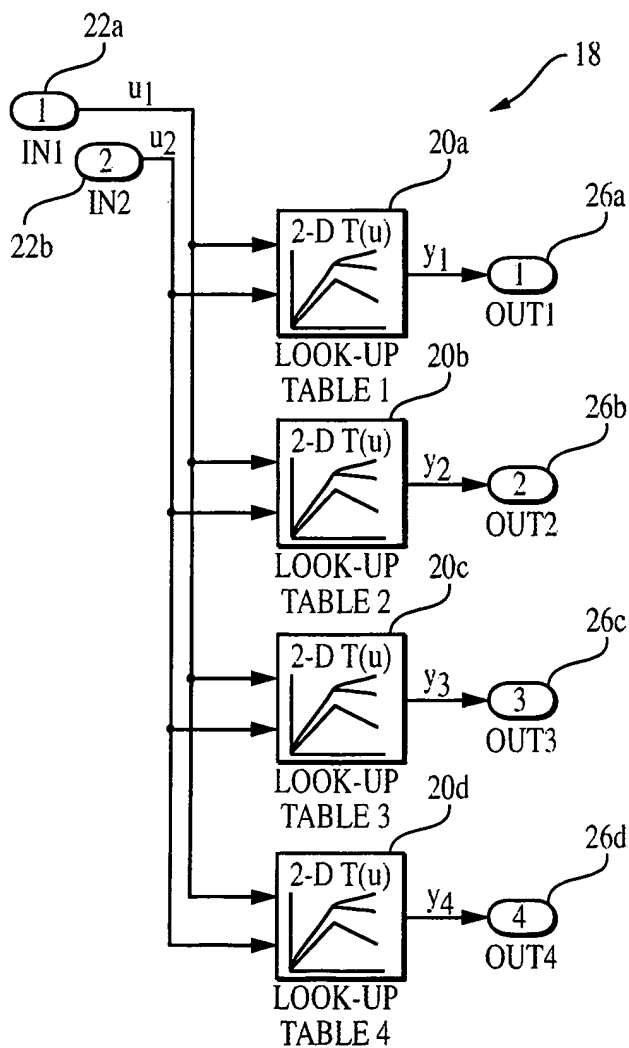


FIG. 1B  
PRIOR ART

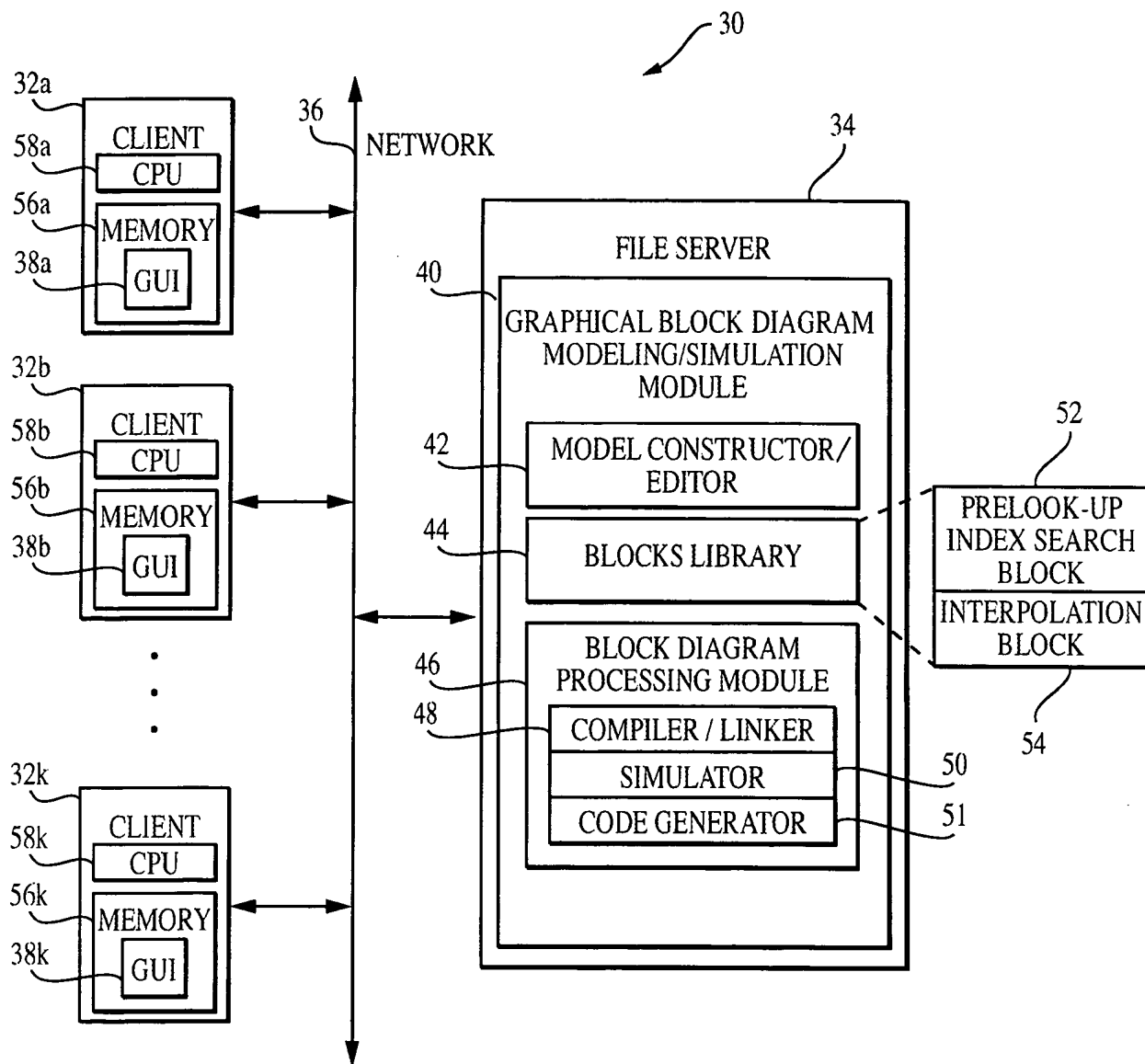


FIG. 2

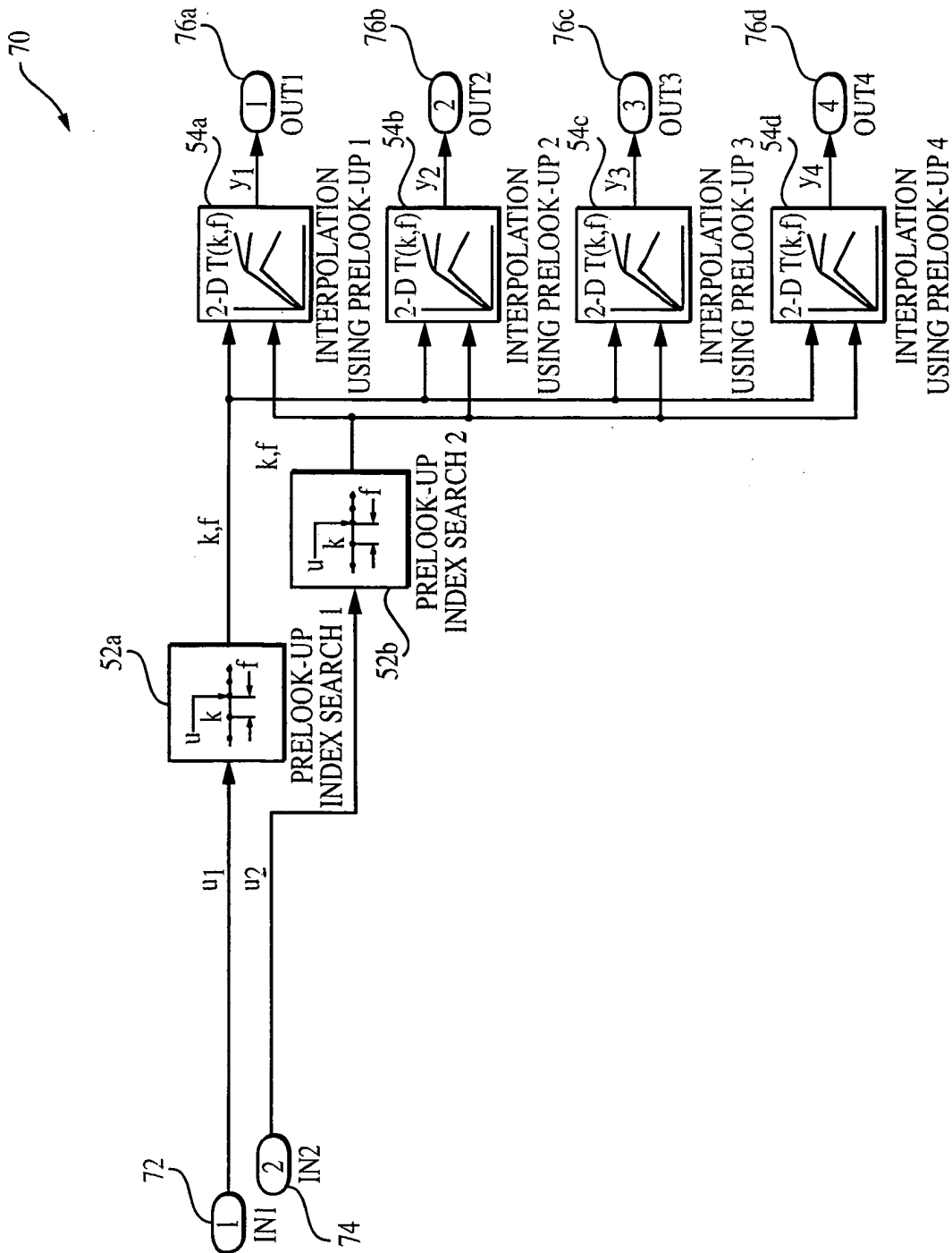


FIG. 3B

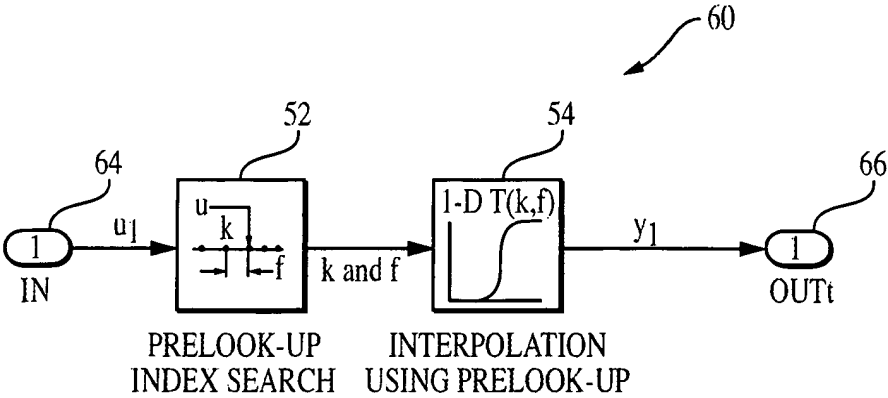


FIG. 3A

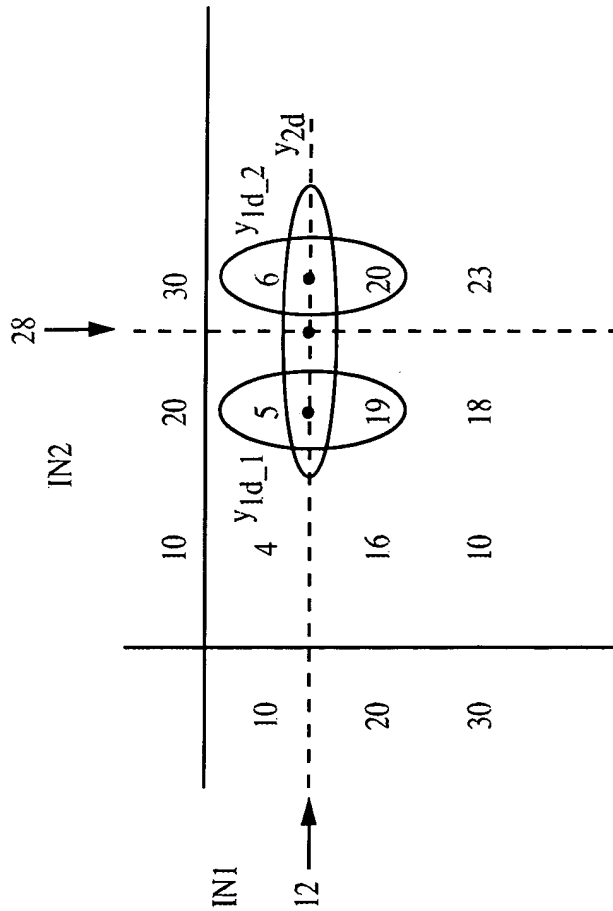


FIG. 4

FIG. 5



100

**Block Parameters: Look-Up Table (2-D)** [X]

Lookup Table [2-D] [mask] [link]

Performs 2-D linear interpolation of input values using the specified input/output table. Extrapolation is performed outside the table boundaries. The first dimension corresponds to the top [or left] input port.

Parameters

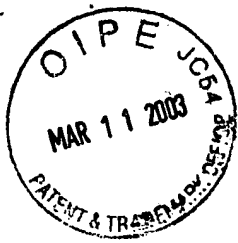
Row: [10,20,30] 102

Column: [10,20,30] 104

Table: [4 5 6;16 19 20;10 18 23] 106

OK Cancel Help Apply

FIG. 6



**Block Parameters: PreLook-Up Index Search** [X]

LookupIdxSearch [mask] [link]

Locate the input value's relative position within a range of numbers [the "breakpoint data" set]. Returns an array of the interval index "k" and distance fraction "f" that the input "u" reaches into the kth interval.

Parameters

Breakpoint data:

[10,20,30] 112

Index search method: Binary Search 114

☐ Begin index search using previous index result

☐ Output only the index

Process out of range input: Linear Extrapolation 115

Action for out of range input: None

OK Cancel Help Apply

110a

FIG. 7A

**Block Parameters: PreLook-Up Index Search1** [X]

LookupIdxSearch [mask] [link]

Locate the input values relative position within a range of numbers [the "breakpoint data" set]. Returns an array of the interval index "k" and distance fraction "f" that the input "u" reaches into the kth interval.

Parameters

Breakpoint data:

[10,20,30] 112

Index search method: Binary Search 114

☐ Begin index search using previous index result

☐ Output only the index

Process out of range input: Linear Extrapolation 115

Action for out of range input: None

OK Cancel Help Apply

110b

FIG. 7B





**Block Parameters: Interpolation(n-D) using PreLook-Up** [X]

LookupNDInterpldx [mask] [link]

Perform n-dimensional [n-D] interpolated table lookup using precalculated indices and distance fractions. An n-D Table is a sampled representation of a function in N variables. This block is fed with the output of a PreLook-Up Index Search block. The first dimension corresponds to the top [or left] input port.

Parameters

Number of table dimensions: 2

Table data:  
[4 5 6;16 19 20;10 18 23]

Interpolation method: Linear

Extrapolation method: Linear

Action for out of range input: None

OK Cancel Help Apply

116

118

FIG. 8

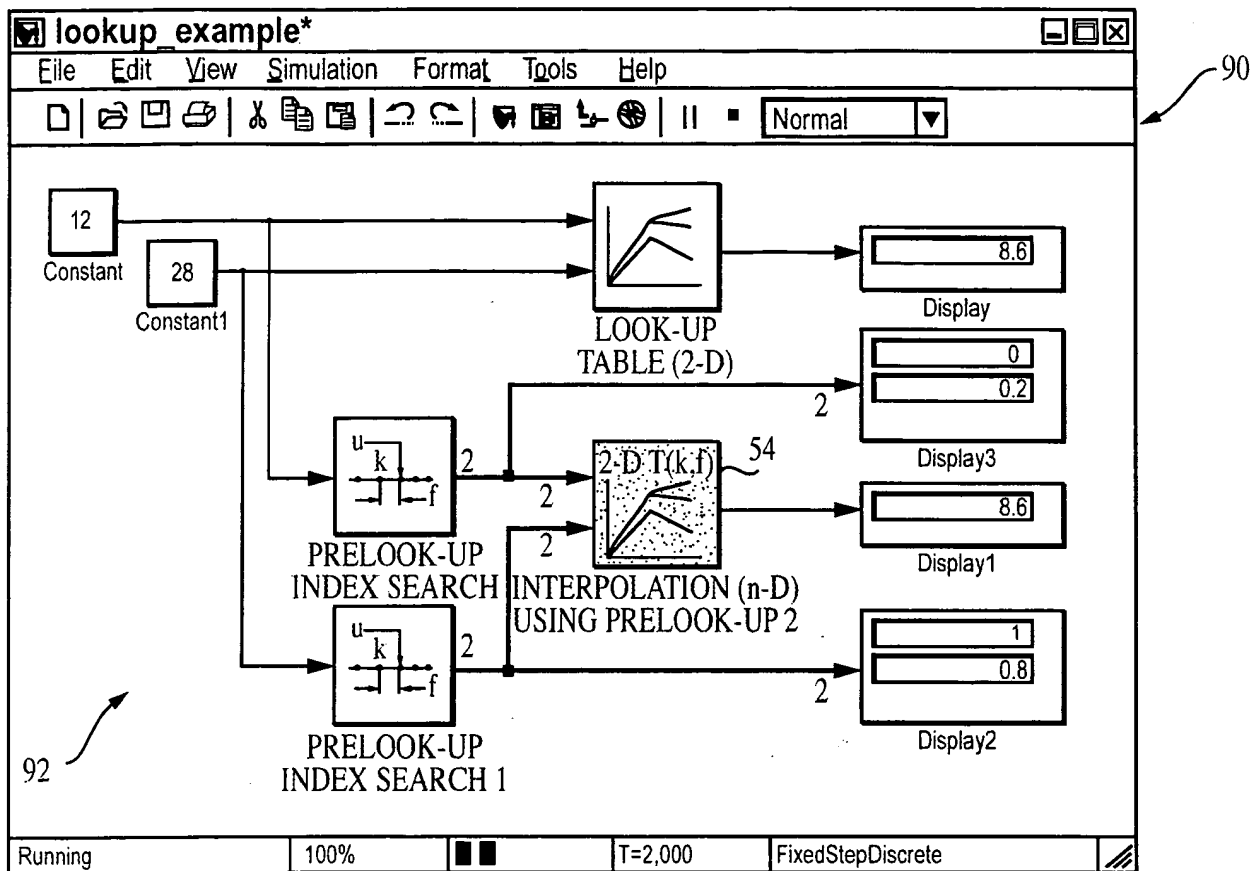


FIG. 9

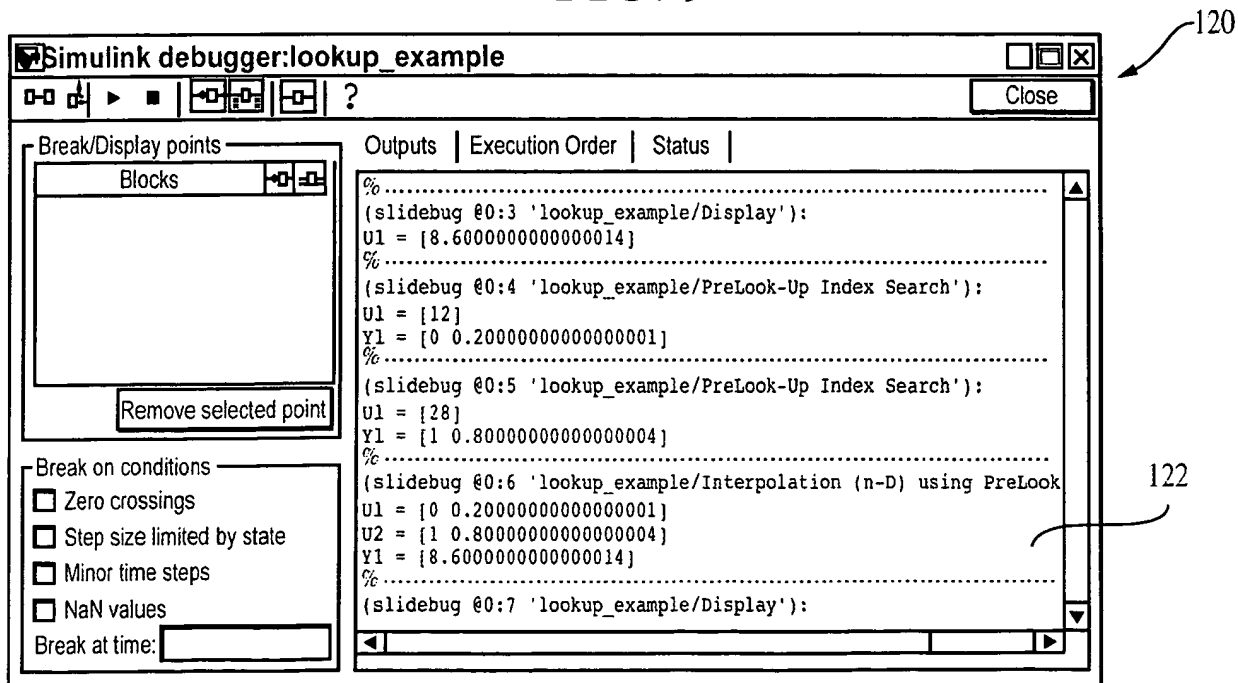


FIG. 10